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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,011	10/15/2001	Toshinori Moriga	Q66612	9607
7590 12/01/2003				
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213				
EXAMINER				
GORR, RACHEL P				
ART UNIT		PAPER NUMBER		
1731				

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

Application No.

09/976,011

Applicant(s)

MORIGA ET AL.

Examiner

Rachel F. Gorr

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Claims 1, 2, 15, 16, 20 and 34 are objected to because of the following informalities: Claims 1, 15 and 20 have extraneous numbers. In claim 2 and 16, the words "isocyanurate" and "forming" are run together. Claim 14, says "at 150 to 24000". Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Szycher.

Hashimoto discloses polyurethane sealing gaskets made from polyurethane prepolymers having a functionality of 2-3 and the NCO content specified in the applicants' claims and polyols having OH numbers of 56 and 67 and functionalities of 2-3 (see example 4). The prepolymer, which is a urethane modified polyisocyanate, would have an NCO content of 21 wt. %, and the 2000 molecular weight glycol has an hydroxyl value of 56. He discloses polyols having molecular weights of 400-3000 (col. 4, line 54, and teaches that mixtures of any of these can be used. He reacts the gasket components on the surface of the caps to form integral gaskets (see examples). He shows the same properties as the claims (col. 2, lines 18-19, 24-25), and he discloses no weight loss of the gasket over time (see abstract), which would mean that nothing is extracted from the gasket. He differs from the claims by using an aromatic

polyisocyanate (diphenylmethane – MDI) versus using an aliphatic or cycloaliphatic polyisocyanate, and he forms the gasket at lower temperatures.

Szycher discloses that cycloaliphatic polyisocyanates are more hydrolytically stable than MDI (bottom page 4-31 – top page 4-32), and lower in reactivity. On page 4-33, he shows that hexamethylene diisocyanate (HDI) and isophorone diisocyanate (IPDI) are two of the three most common aliphatic polyisocyanates.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use aliphatic polyisocyanate rather than MDI in Hashimoto's gaskets because Szycher teaches its better hydrolytic stability. It would be obvious to process a less reactive polyisocyanate at higher temperatures to shorten the reaction time.

Applicant's arguments filed 11-10-03 have been fully considered but they are not persuasive. The applicants argue Hashimoto doesn't show urethane modified polyisocyanates having the NCO content of the claims. He does show this. The applicants argue that Hashimoto doesn't disclose the same OH numbers of the polyol component. He does. The applicants argue that neither Hashimoto or Szycher address yellowing of the gasket. The applicants' claims say nothing about yellowing. The applicants argue that Szycher doesn't teach replacing aromatic polyisocyanates with aliphatic ones. One of skill in the art would be motivated to do this in order to obtain gaskets having better hydrolytic stability. The applicants argue that changing the polyisocyanate of Hashimoto wouldn't provide gaskets of the same properties. One of skill in the art could adjust the formulation if needed to obtain the same properties.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel F. Gorr whose telephone number is 703-308-3608. The examiner can normally be reached on Mon., Tues., Thurs., Fri., from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 703-308-2462. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

R.G.

  
**RACHEL GORR**  
**PRIMARY EXAMINER**